

AMENDMENTS TO THE CLAIMS

1-156. (Canceled)

157 (Currently amended). A semiconductor light-emitting device constituted by mounting a semiconductor light-emitting element on a base substance, wherein

the semiconductor light-emitting element has outgoing emits light having an emission wavelength only in a range of 390 to 420 nm, the light having visibility lower than light in a visible range more than 420 nm; and

there is included a fluorescent substance that is excited by outgoing light from the semiconductor light-emitting element and emits red light having an emission wavelength with its main emission peak in a wavelength range of 600 to 670 nm, wherein

the fluorescent substance is composed of any one or more selected from a fluorescent substance group consisting of:

$M_2 O_2 S$ : Eu (M is any one or more elements selected from La, Gd and Y);

$0.5 MgF_2 \cdot 3.5MgO \cdot GeO_2$  : Mn;

$Y_2 O_3$  : Eu;

$Y(P, V) O_4$  : Eu; and

$YVO_4$  : Eu.

158 (Currently amended). A semiconductor light-emitting device constituted by mounting a semiconductor light-emitting element on a base substance, wherein

the semiconductor light-emitting element has outgoing emits light having an emission wavelength only in a range of 390 to 420 nm, the light having visibility lower than light in a visible range more than 420 nm; and

there is included a fluorescent substance that is excited by outgoing light from the semiconductor light-emitting element and emits green light having an emission wavelength with its main emission peak in a wavelength range of 500 to 540 nm, wherein

the fluorescent substance is composed of any one or more selected from a fluorescent substance group consisting of:

$\text{RMg}_2\text{Al}_{16}\text{O}_{27}$  : Eu, Mn (R is any one or both elements selected from Sr and Ba);

$\text{RMgAl}_{10}\text{O}_{17}$  : Eu, Mn (R is any one or both elements selected from Sr and Ba);

ZnS: Cu;

$\text{SrAl}_2\text{O}_4$  : Eu;

$\text{SrAl}_2\text{O}_4$  : Eu, Dy;

ZnO: Zn;

$\text{Zn}_2\text{Ge}_2\text{O}_4$  : Mn;

$\text{Zn}_2\text{SiO}_4$  : Mn; and

$\text{Q}_3\text{MgSi}_2\text{O}_8$  : Eu, Mn (Q is any one or more elements selected from Sr, Ba and Ca).

159 (Currently amended). A semiconductor light-emitting device constituted by mounting a semiconductor light-emitting element on a base substance, wherein

the semiconductor light-emitting element ~~has outgoing~~ emits light having an emission wavelength only in a range of 390 to 420 nm, the light having visibility lower than light in a visible range more than 420 nm; and

there is included a fluorescent substance that is excited by outgoing light from the semiconductor light-emitting element and emits blue light having an emission wavelength with its main emission peak in a wavelength range of 410 to 480 nm, wherein

the fluorescent substance is composed of any one or more selected from a fluorescent substance group consisting of:

$\text{A}_{10}(\text{PO}_4)_6\text{Cl}_2$  : Eu (A is any one or more elements selected from Sr, Ca, Ba, Mg and Ce);

$\text{XMg}_2\text{Al}_{16}\text{O}_{27}$  : Eu (X is any one or both elements selected from Sr and Ba);

$\text{XMgAl}_{10}\text{O}_{17}$  : Eu (X is any one or both elements selected from Sr and Ba);

ZnS: Ag;

$\text{Sr}_{10}(\text{PO}_4)_6\text{Cl}_2$  : Eu;

$\text{Ca}_{10}(\text{PO}_4)_6\text{F}_2$  : Sb;

$\text{Z}_3\text{MgSi}_2\text{O}_8$  : Eu (Z is any one or more elements selected from Sr, Ca and Ba);

$\text{SrMgSi}_2\text{O}_8$  : Eu;

$\text{Sr}_2\text{P}_2\text{O}_7$  : Eu; and

$\text{CaAl}_2\text{O}_4$  : Eu, Nd.

160 (Currently amended). A semiconductor light-emitting device constituted by mounting a semiconductor light-emitting element on a base substance, wherein

the semiconductor light-emitting element ~~has outgoing emits~~ light having an emission wavelength only in a range of 390 to 420 nm, the light having visibility lower than light in a visible range more than 420 nm; and

there is included a fluorescent substance that is excited by outgoing light from the semiconductor light-emitting element and emits blue green light having an emission wavelength with its main emission peak in a wavelength range of 480 to 500 nm, wherein

the fluorescent substance is composed of any one or more selected from a fluorescent substance group consisting of:

$\text{Sr}_4\text{Al}_{14}\text{O}_{25}$  : Eu;

$\text{Sr}_4\text{Al}_{14}\text{O}_{25}$  : Eu, Dy;

$\text{L}_{10}(\text{PO}_4)_6\text{Cl}_2$  : Eu (L is any one or more elements selected from Ba, Ca and Mg); and

$\text{Sr}_2\text{Si}_3\text{O}_8 \cdot 2\text{SrCl}_2$  : Eu.

161 (Currently amended). A semiconductor light-emitting device constituted by mounting a semiconductor light-emitting element on a base substance, wherein

the semiconductor light-emitting element ~~has outgoing emits~~ light having an emission wavelength only in a range of 390 to 420 nm, the light having visibility lower than light in a visible range more than 420 nm; and

there is included a fluorescent substance that is excited by outgoing light from the semiconductor light-emitting element and emits orange light having an emission wavelength with its main emission peak in a wavelength range of 570 to 600 nm.

162 (Previously presented). The semiconductor light-emitting device according to Claim 161, wherein the fluorescent substance is composed of any one or more selected from a fluorescent substance group consisting of:

ZnS: Mn; and

ZnS: Cu, Mn, Co.

163-184 (Canceled)

185 (Previously presented). The semiconductor light-emitting device according to Claim 157, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion; and

the fluorescent substance is filled in the recessed portion.

186 (Previously presented). The semiconductor light-emitting device according to Claim 158, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion; and

the fluorescent substance is filled in the recessed portion.

187 (Previously presented). The semiconductor light-emitting device according to Claim 159, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion; and

the fluorescent substance is filled in the recessed portion.

188 (Previously presented). The semiconductor light-emitting device according to Claim 160, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion; and

the fluorescent substance is filled in the recessed portion.

189 (Previously presented). The semiconductor light-emitting device according to Claim 161, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion; and

the fluorescent substance is filled in the recessed portion.

190 (Canceled)

191 (Previously presented). The semiconductor light-emitting device according to Claim 157, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion;

a sealing resin is filled in the recessed portion; and

the fluorescent substance is disposed on the sealing resin.

192 (Previously presented). The semiconductor light-emitting device according to Claim 158, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion;

a sealing resin is filled in the recessed portion; and

the fluorescent substance is disposed on the sealing resin.

193 (Previously presented). The semiconductor light-emitting device according to Claim 159, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion;

a sealing resin is filled in the recessed portion; and

the fluorescent substance is disposed on the sealing resin.

194 (Previously presented). The semiconductor light-emitting device according to Claim 160, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion;

a sealing resin is filled in the recessed portion; and

the fluorescent substance is disposed on the sealing resin.

195 (Previously presented). The semiconductor light-emitting device according to Claim 161, wherein

the base substance is a substrate provided with metallic wiring;

the semiconductor light-emitting element is electrically connected to the metallic wiring on the substrate and disposed in a recessed portion;

a sealing resin is filled in the recessed portion; and

the fluorescent substance is disposed on the sealing resin.

196-215 (Canceled)

216 (Currently amended). A semiconductor light-emitting device constituted by mounting a semiconductor light-emitting element on a base substance, wherein

the semiconductor light-emitting element has outgoing emits light having an emission wavelengths wavelength only in a range of 390 to 420 nm, the light having visibility lower than light in a visible range more than 420 nm;

a first fluorescent substance, a second fluorescent substance and a third fluorescent substance are included;

the first fluorescent substance has red outgoing light having emission wavelengths with its main emission peak in a wavelength range of 600 to 670 nm;

the second fluorescent substance has green outgoing light having emission wavelengths with its main emission peak in a wavelength range of 500 to 540 nm;

the third fluorescent substance has blue outgoing light having emission wavelengths with its main emission peak in a wavelength range of 410 to 480 nm; and

the sum of colors of light emitted from the first, second and third fluorescent substances is a white color, wherein

the first fluorescent substance is composed of any one or more selected from a fluorescent substance group consisting of:

$M_2 O_2 S$ : Eu (M is any one or more elements selected from La, Gd and Y);

$0.5MgF_2 \cdot 3.5MgO \cdot GeO_2$  : Mn;

$Y_2 O_3$  : Eu,

Y(P, V) O<sub>4</sub> : Eu; and

YVO<sub>4</sub> : Eu;

the second fluorescent substance is composed of any one or more selected from a fluorescent substance group consisting of:

RMg<sub>2</sub> Al<sub>16</sub> O<sub>27</sub> : Eu, Mn (R is any one or both elements selected from Sr and Ba);

RMgAl<sub>10</sub> O<sub>17</sub> : Eu, Mn (R is any one or both elements selected from Sr and Ba);

ZnS: Cu;

SrAl<sub>2</sub> O<sub>4</sub> : Eu;

SrAl<sub>2</sub> O<sub>4</sub> : Eu, Dy;

ZnO: Zn;

Zn<sub>2</sub> Ge<sub>2</sub> O<sub>4</sub> : Mn;

Zn<sub>2</sub> SiO<sub>4</sub> : Mn; and

Q<sub>3</sub> MgSi<sub>2</sub> O<sub>8</sub> : Eu, Mn (Q is any one or more elements selected from Sr, Ba and Ca); and

the third fluorescent substance is composed of any one or more selected from a fluorescent substance group consisting of:

A<sub>10</sub> (PO<sub>4</sub>)<sub>6</sub> Cl<sub>2</sub> : Eu (A is any one or more elements selected from Sr, Ca, Ba, Mg and Ce);

XMg<sub>2</sub> Al<sub>16</sub> O<sub>27</sub> : E (X is any one or both elements selected from Sr and Ba);

XMgAl<sub>10</sub> O<sub>17</sub> : Eu (X is any one or both elements selected from Sr and Ba);

ZnS: Ag;

Sr<sub>10</sub> (PO<sub>4</sub>)<sub>6</sub> Cl<sub>2</sub> : Eu;

Ca<sub>10</sub> (PO<sub>4</sub>)<sub>6</sub> F<sub>2</sub> : Sb;

Z<sub>3</sub> MgSi<sub>2</sub> O<sub>8</sub> : Eu (Z is any one or more elements selected from Sr, Ca and Ba);

SrMgSi<sub>2</sub> O<sub>8</sub> : Eu;

Sr<sub>2</sub> P<sub>2</sub> O<sub>7</sub> : Eu;

CaAl<sub>2</sub> O<sub>4</sub> : Eu, Nd.

217 (Previously presented). The semiconductor light-emitting device according to Claim 216, wherein, assuming the total amount as 100 weight %,

the first fluorescent substance is between 50 weight % and 70 weight % inclusive;

the second fluorescent substance is between 7 weight % and 20 weight % inclusive; and

the third fluorescent substance is between 20 weight % and 30 weight % inclusive.  
218 (Previously presented). The semiconductor light-emitting device according to Claim 217, wherein

the sealing resin contains the first, second and third fluorescent substances; and  
the proportion of the total weight of the first, second and third fluorescent substances to the weight of the sealing resin is between 0.5 and 1 inclusive.

219 (Previously presented). A light-emitting display device comprising;  
a light source using the semiconductor light-emitting device according to Claim 216;  
a light guiding plate for guiding light from the light source; and  
red, green and blue color filters for transmitting light from the light guiding plate and dividing the light; the light-emitting display device, wherein

outgoing light from the semiconductor light-emitting device has a wavelength distribution that matches spectral characteristics of the color filters.

220 (Previously presented). The light-emitting display device according to Claim 219, wherein at least one of the following is adjusted so that the wavelength distribution of the outgoing light from the semiconductor light-emitting device matches spectral characteristics of the color filters:

the emission wavelength of the semiconductor light-emitting element;  
the emission wavelength of the first fluorescent substance;  
the emission wavelength of the second fluorescent substance;  
the emission wavelength of the third fluorescent substance;  
the mixture proportions of the first, second and third fluorescent substances; and the proportion of the total weight of the first, second and third fluorescent substances to the weight of the sealing resin.

221-222 (Canceled)